

# More care needed in use of farm chemicals

Farm chemicals rank a great deal higher as a risk to life in the general consciousness than they do in the annual accident statistics. There, the most dangerous thing on the farm turns out to be the tractor; other machinery, bulls, shotguns, awkward ladders have all over the years killed far more people than have died from poisoning.

Nevertheless, the growing popularity of using a total weedkiller to clean a field without the use of the plough and then sowing straight into the undisturbed soil, "direct drilling", does call for more care about chemicals. Those involved here are nearly always the bipyridins, paraquat and diquat.

To the normal user they present few enough hazards, especially if protective clothing is worn when handling the liquid concentrates. They are quickly taken up by plants and chemically transformed, and any which fall on soil are immobilized.

By comparison with many other substances constantly used in agriculture and industry, they are not very toxic—at least quantitatively. But taken by mouth they proved to induce effects in the body which appeared to be irreversible and fatal.

Hitherto, the really dangerous substances had been regarded as those which could be absorbed through the skin or the eyes, or breathed in as vapours. Some of these, such as the organo-phosphorus compounds, had physical effects that were not easy to diagnose until they were better known.

They certainly claimed a number of victims, especially in more primitive communities, where murder as well as accident has been suspected. Murder by paraquat would not be easy. It has been used for attempted suicide, along with almost every other toxic and corrosive substance coming easily to hand.

Its accidental killings have been peculiarly distressing.

since the victims in most cases have been children. The bulk of them have drunk the concentrate out of bottles into which it had been decanted for casual use in the garden. Some of these bottles still had labels for the lemonade or other soft drinks they originally contained.

The form in which these chemicals are sold for amateur garden use is virtually fool-proof, being solid and diluted. It is also relatively expensive and less easy to apply than the farming liquid. Hence the temptation to help oneself to a bulk supply.

An inquiry by the makers among farmer users threw a rather curious light on this. Probing a little deeper, it was found that they had heard of the accidents and some of them did take routine precautions with all their spray chemicals. They kept them under lock and key and took care to destroy all empty containers after use.

Others seemed to think a high shelf or a loft were safe enough from children.

The inquiry threw up some other hazards, which have had rather less notice. Plastic spray containers are often a useful shape and size for other purposes; they were being used for water, diesel and oil waste.

"There are endless uses for them", according to one farmer.

But another, who now burns all his, had noticed a dangerous similarity with the containers in which chain stores and supermarkets sell fruit juices. His children use these to fill with water, and he would not risk confusion.

The present formulation is safer than it was and the labelling does indicate risk. But labels are not always read and understood—seldom, indeed, by inquisitive children. Keeping such things out of reach is the only safe course, as it is with a range of rather less toxic but potentially dangerous household chemicals which also come in handy plastic containers.

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